UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/886,388	07/01/97	SANDHU G	MI22-713

MM21/0901

WELLS ST JOHN
ROBERTS GREGORY & MATKIN
SUITE 1300
601 W FIRST AVENUE
SPOKANE WA 99204-0317

EXAMINER	
HUGHES WILLIAM	
ART UNIT	**PAPER NUMBER**
2811	

DATE MAILED: 09/01/98

Plea e find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 08/886,388	Applicant(s) Sandu et al.
	Examiner Bill Hughes	Group Art Unit 2811

☒ Responsive to communication(s) filed on *Jan 3, 1996*.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *43-45* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *43-45* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *3*

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 43-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "minimum width which is less than the minimum capable photolithographic feature dimension at the time of fabrication" in claims 43-45 is a relative term which renders the claim indefinite. The term "minimum width which is less than the minimum capable photolithographic feature dimension at the time of fabrication" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention, whether the phrase refers to the width of the stem (claims 43 and 45) or the spacing between capacitors (claim 44). "Minimum capable photolithographic feature dimension" is a quantity which varies, for example, by type and quality of equipment used and by time. The minimum possible dimension is smaller today than in the past, and presumably could be smaller still in the future. That the phrase "at the time of fabrication" is included in the claims only renders them more indefinite, not less, because it is unclear whether applicant intends "at the time of fabrication" to mean "at a time when this particular invention was made" or "at any time in the future."

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 43, inasmuch as it is in accordance with 35 U.S.C. §112(2), is rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al. Kimura discloses (see Figure 2G) a capacitor construction comprising a stem (**28, 30**) and at least two laterally opposed fins (**28, 30**) interconnected with and projecting laterally from the stem.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura. Regarding claim 44, Kimura does not teach a pair of adjacent capacitors fabricated relative to a semiconductor substrate. However, duplicating parts for a multiplied effect is evidence of

obviousness. St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8 at 11 (CA 7th Cir.). Regarding claim 45, Kimura, as discussed above, discloses (see Figure 2G) a capacitor construction comprising a stem (**28, 30**) and at least two laterally opposed fins (**28, 30**) interconnected with and projecting laterally from the stem.

It is noted that even if the term "minimum width which is less than the minimum capable photolithographic feature dimension at the time of fabrication" was held to be clear (and claims 43-45 were therefore not rejected under 35 U.S.C. §112(2)), the three claims could nevertheless be rejected in their entirety under 35 U.S.C. 103(a), because it has been held that the applicant must show that a particular range (i.e., here, the range being the width of the stem and the spacing between capacitors) is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Circ. 1990). Furthermore, the law is replete with cases in which when the mere difference between the claimed invention and the prior art is some dimensional limitation or other variable within the claims, patentability cannot be found. Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions. See Gardner v. TEC Systems, Inc., 725 F.2d 1338 (Fed. Circ. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art. In the present case, there is no indication that the "sub-lithographic" distances in question have other purpose than the well known desired results of increasing capacitance (claims 43 and 45) and degree of integration of the circuit (claim 44).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Both Tseng and Miura et al. disclose structures which describe a capacitor with a stem and at least two laterally opposed fins. Note however that Tseng (although he discloses virtually the same method and device as the present application) is a method patent which was filed and published after the filing date of the present device application. Therefore, Tseng could not serve as a basis of rejection; however, it is supporting evidence of the conclusion of obviousness which was reached above.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bill Hughes whose telephone number is (703) 308-6183.

Tom Thomas

Tom Thomas
Supervisory Patent Examiner
Technology Center 2800

wgh

August 21, 1998